Table S I. Relationships between physical-chemical parameters and Chl *a* fractions for surface waters across the Southern Indian Ocean, Oct./Nov. 2006. Distributions: N = normal, LN = lognormal. Significant variations for station and depth ($p<0.05$) are highlighted in bold. Stations are ranked by increasing order with clusters having equal means (shown within boxes) identified by Student Newman-Keuls test.

Surface water:		Distribution	p(station) (df =6, 4[x])	p(depth) (df =4[a], 3[b])	Station difference
Physical-chemical variables	Salinity	N	**<0.0001**	0.6397 [a]	2 7 3 1 6 5 4
	Temp.	N	**<0.0001**	**0.0037 [a]**	2 3 4 5 1 6 7
	NO3	LN	**<0.0001**	0.0899 [a]	7 6 5 4 1 2 3
	PO4	LN	**<0.0001**	0.1404 [a]	6 7 5 4 1 2 3
	Si	LN	**<0.0001**	**0.0237 [a]**	2 5 4 1 3 6 7
Chloro-phyll a	Total	LN	**<0.0001**	0.0630 [a]	6 5 4 7 3 1 2
	>10 µm	LN	**<0.0001**	0.5234 [b]	5 4 6 7 1 3 2
	>50 µm	LN	0.1007 [x]	0.5000 [b]	4 5 6 7 3

Table S II. Larvacean, copepodite and copepod nauplii sizes (µm) for different depths (10-400 m) across the Southern Indian Ocean (stations 1-7). Station 2 lacks values for 10 m sample; 80 m values were only available for station 7. For each depth, upper row shows mean size (µm) ± SD, lower row the number of counted individuals and number of measured individuals (in brackets).

Depth	Station 1			Station 2			Station 3			Station 4			Station 5			Station 6			Station 7		
[m]	Larvacea	Copepod	C. Nauplii	Larvacea	Copepod	C. Nauplii	Larvacea	Copepod	C. Nauplii	Larvacea	Copepod	C. Nauplii	Larvacea	Copepod	C. Nauplii	Larvacea	Copepod	C. Nauplii	Larvacea	Copepod	C. Nauplii
	131±42	289±45	138±29				124±15	505±385	143±53	69±0	517±439	127±54	125±41	523±152	132±54	154±84	258±211	149±59	183±144	256±149	163±62
10	5(5)	25(25)	71(71)				6(4)	239(145)	384(243)	1(1)	13(13)	72(72)	10(10)	12(12)	57(57)	2(2)	28(28)	70(70)	14(14)	25(25)	39(39)
	109±0	314±121	133±37	124±15	323±90	141±40	506±799	341±187	140±41	69±0	422±259	135±47	161±89	447±251	136±50	143±109	276±182	114±33	230±229	340±184	145±53
30	1(1)	99(99)	331(331)	2(2)	295(295)	489(324)	10(10)	132(74)	179(111)	1(1)	43(43)	118(118)	11(11)	30(30)	42(42)	5(5)	47(47)	111(111)	30(30)	95(66)	117(76)
	109±0	337±183	131±36	155±66	349±139	137±42	131±25	289±128	139±42	159±159	322±178	131±44	153±106	410±231	119±39	91±28	231±129	108±34	204±157	290±195	123±34
60	1(1)	208(208)	260(260)	20(20)	142(142)	217(217)	4(4)	97(97)	173(173)	5(5)	39(39)	115(115)	50(50)	83(65)	126(99)	5(5)	36(36)	101(101)	29(29)	54(54)	104(104)
																			233±149	296±239	135±37
80																			58(58)	123(123)	146(146)
	105±36	336±142	129±45	149±37	362±325	154±51	153±48	324±196	134±45	149±87	264±230	130±44	188±199	299±227	129±43	172±102	211±118	104±35	281±162	292±218	148±57
100	7(7)	173(173)	186(186)	3(3)	48(48)	80(80)	10(10)	84(58)	151(116)	5(5)	92(92)	175(175)	91(91)	109(102)	226(173)	17(17)	92(92)	140(140)	13(13)	94(94)	122(122)
	133±36	298±328	123±25	398±649	321±145	128±25	134±20	202±51	124±35	202±141	225±156	126±51	149±101	252±102	120±39	124±15	203±89	110±41	99±27	328±269	141±45
200	7(7)	39(39)	56(56)	7(7)	37(37)	40(40)	6(6)	67(67)	133(133)	3(3)	50(50)	74(74)	4(4)	23(23)	70(70)	3(3)	35(35)	76(76)	5(5)	18(18)	59(59)
	221±41	415±300	122±23	124±15	361±118	136±45	161±83	367±404	132±31	173±104	245±93	137±54	105±36	246±111	118±46	213±144	190±104	111±49	107±22	287±161	128±34
400	4(4)	11(11)	24(24)	4(4)	15(15)	24(24)	11(11)	30(30)	71(71)	2(2)	20(20)	65(65)	5(5)	47(47)	120(120)	5(5)	44(44)	67(67)	5(5)	20(20)	29(29)